

5.6

Multiplying and Dividing a Polynomial by a Monomial

FOCUS

- Use different strategies to multiply and divide a polynomial by a monomial.

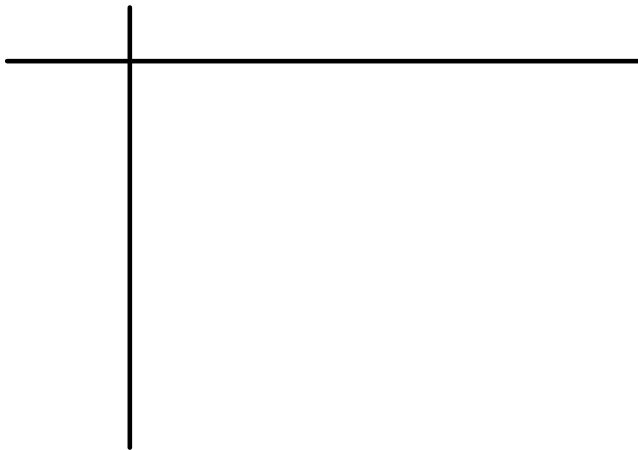
You can use the strategies you know for multiplying and dividing a polynomial by a constant to multiply and divide a polynomial by a monomial.

MULTIPLYING ONLY

Sep 22-9:41 PM

Connect

The expression $(2c)(4c)$ is the product of two monomials.

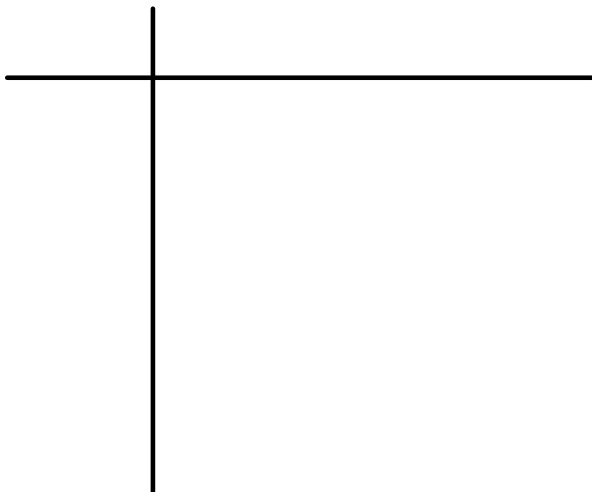


To help build the rectangle, we place guiding tiles to represent each dimension. Then we fill in the rectangle with tiles.

Sep 30-12:53 PM

Connect

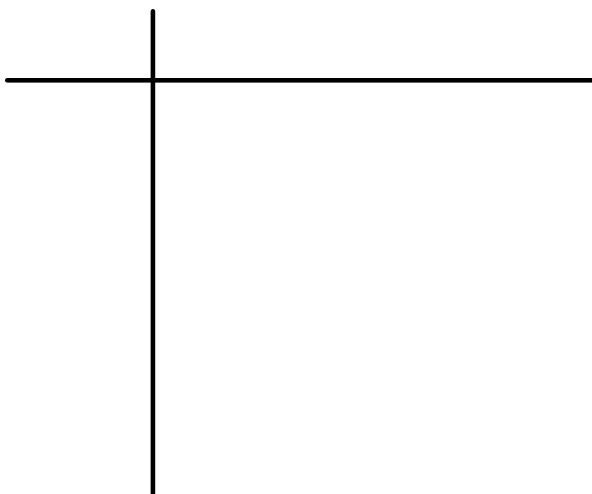
The expression $(2c)(-4c)$ is the product of a positive and a negative monomial.



Sep 30-12:53 PM

Connect

The expression $-4c(2c - 3)$ is the product of a monomial and a binomial.



Sep 30-12:53 PM

Example 1**Multiplying a Binomial by a Monomial**

Determine each product.

a) $2x(3x + 4)$

b) $-2x(-3x + 4)$

SOLUTION:

a) $2x(3x + 4)$

Tiles

Distributive Properties

Sep 22-8:25 PM

Example 1**Multiplying a Binomial by a Monomial**

Determine each product.

a) $2x(3x + 4)$

b) $-2x(-3x + 4)$

SOLUTION:

b) $-2x(-3x + 4)$

Tiles

Distributive Properties

Sep 22-8:25 PM

YOU TRY! Find the product in two ways

$$3x(-2x - 5)$$

SOLUTION:

Tiles

Integer Properties

Sep 22-8:25 PM

YOU TRY! Find the product in two ways

$$-2x(5x - 6)$$

SOLUTION:

Tiles

Integer Properties

Sep 22-8:25 PM

Discuss
the **ideas**

1. Why can we not use repeated addition to model the product $(2c)(4c)$?
 2. Why can we not use an area model to multiply when there are negative terms in the product statement?
-

Sep 22-9:21 PM

Practice

Page 255 # 4,6,7

Page 256 # 12,14

Page 257 # 20,22

Sep 22-9:33 PM